Figure 1

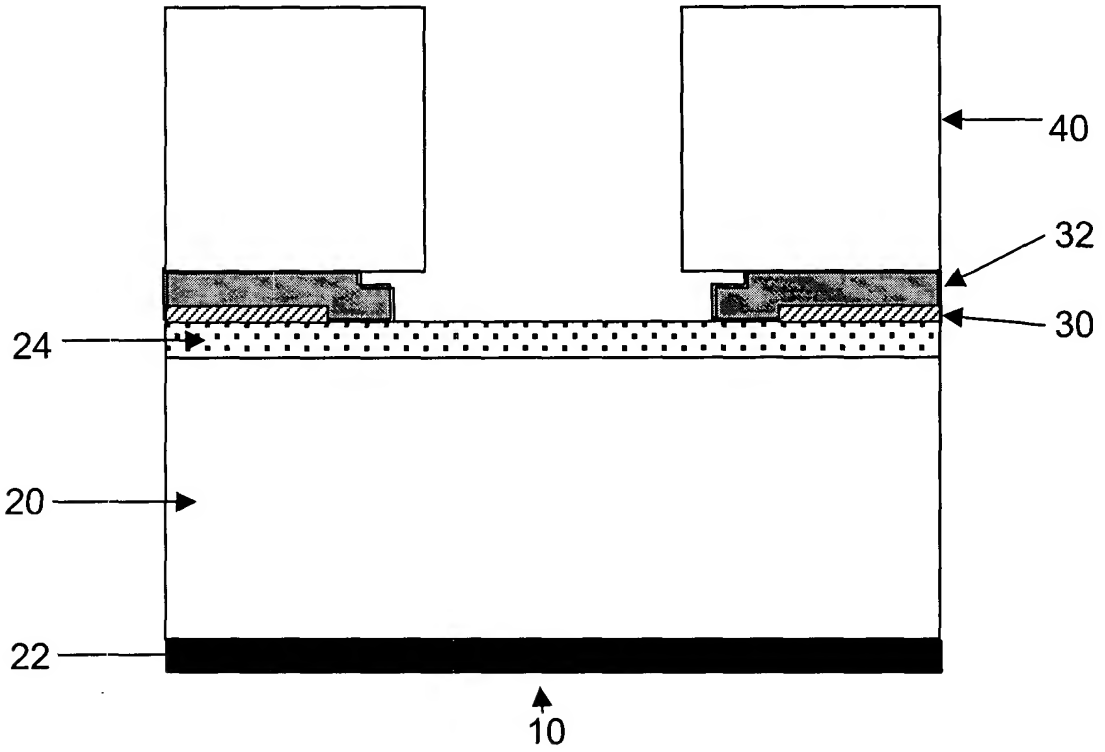


Figure 2

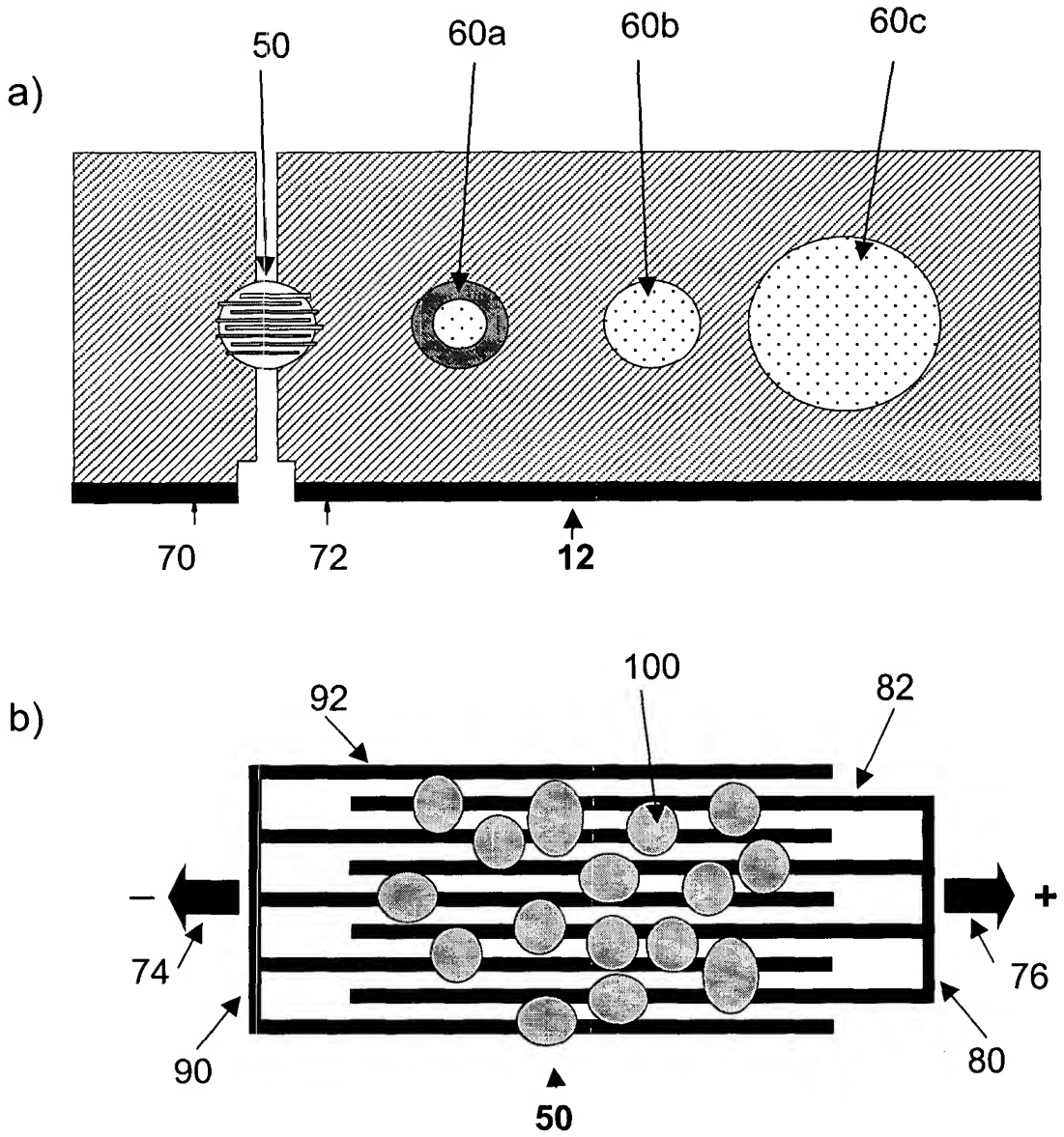


Figure 2 (c)

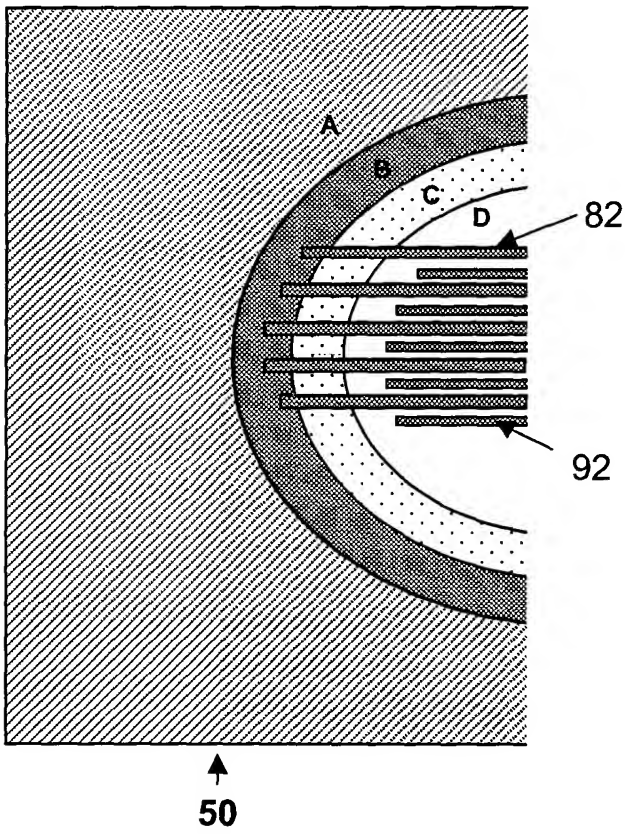


Figure 3

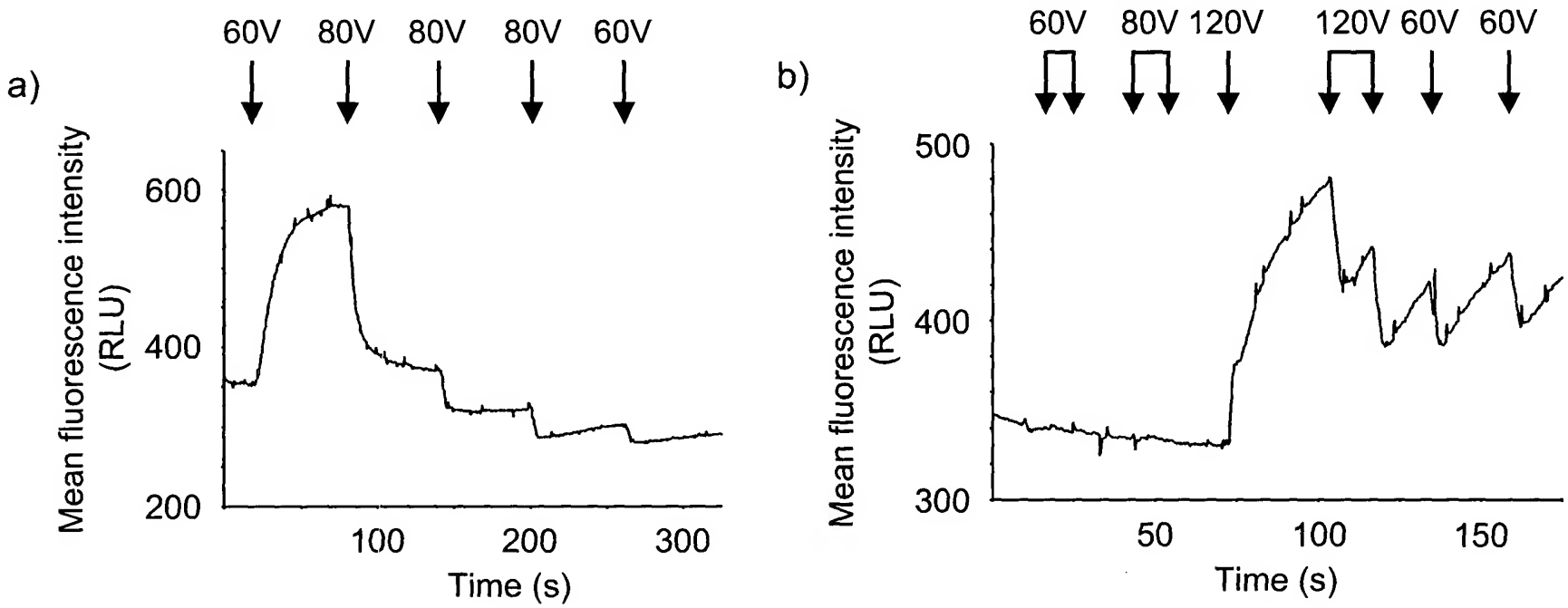

a)
60V
80V
80V
80V
60V
Mean fluorescence intensity (RLU)
600
400
200
100
200
300
Time (s)
b)
60V
80V
120V
120V
60V
60V
Mean fluorescence intensity (RLU)
500
400
300
50
100
150
Time (s)

Figure 4

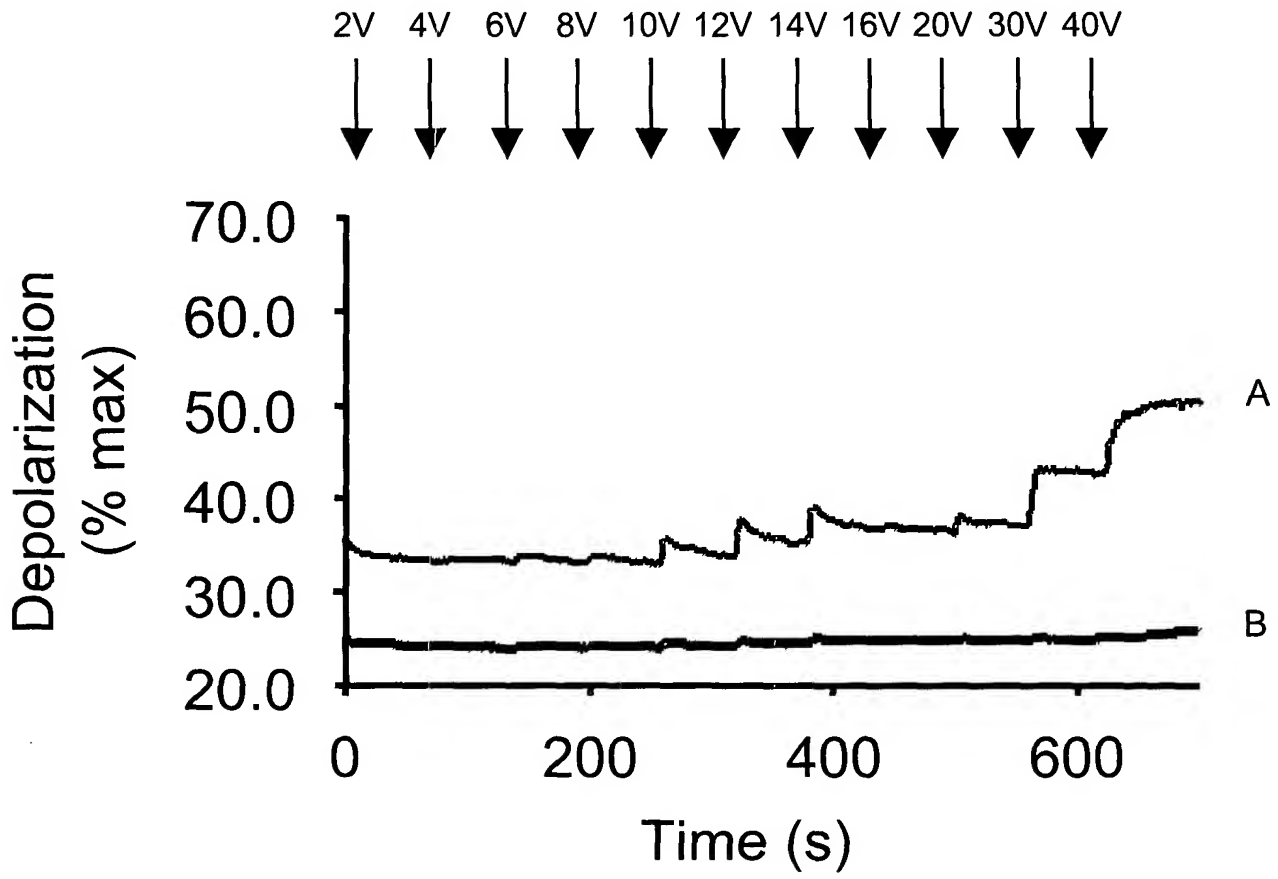
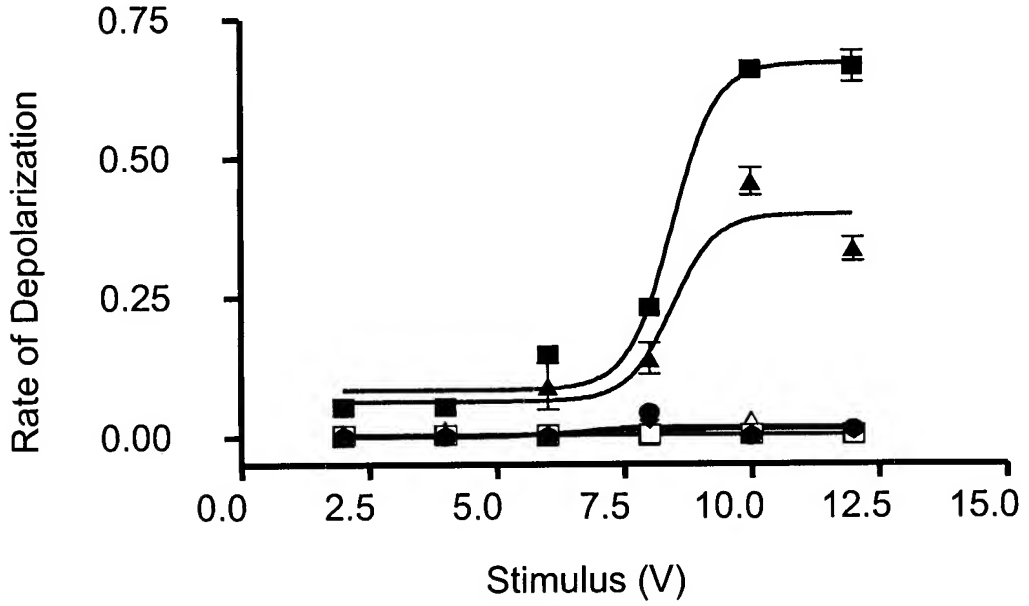

2V
4V
6V
8V
10V
12V
14V
16V
20V
30V
40V
70.0
60.0
50.0
40.0
30.0
20.0
Depolarization (% max)
A
B
0
200
400
600
Time (s)

Figure 5

a)


0.75
0.50
0.25
0.00
Rate of Depolarization
0.0
2.5
5.0
7.5
10.0
12.5
15.0
Stimulus (V)

b)

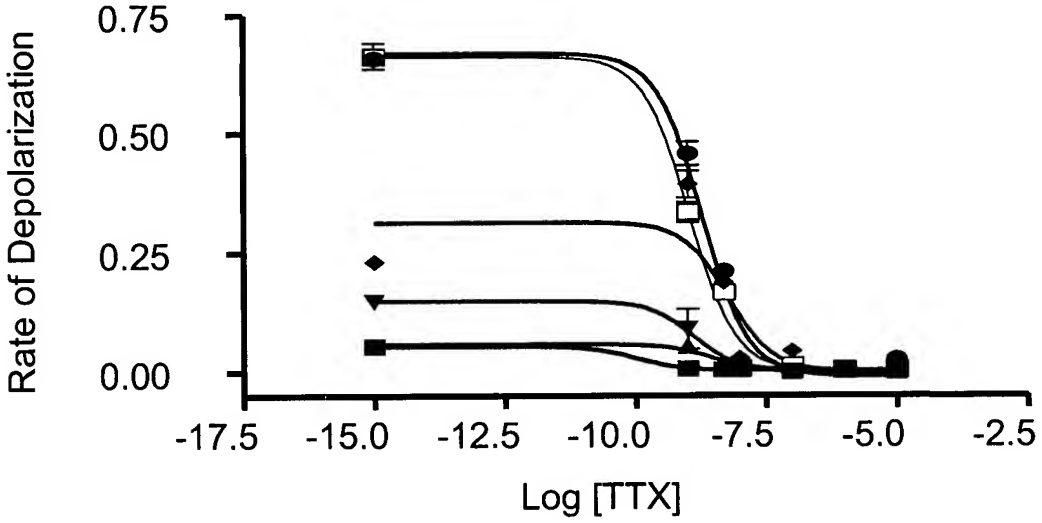

0.75
0.50
0.25
0.00
Rate of Depolarization
-17.5
-15.0
-12.5
-10.0
-7.5
-5.0
-2.5
Log [TTX]

Figure 6

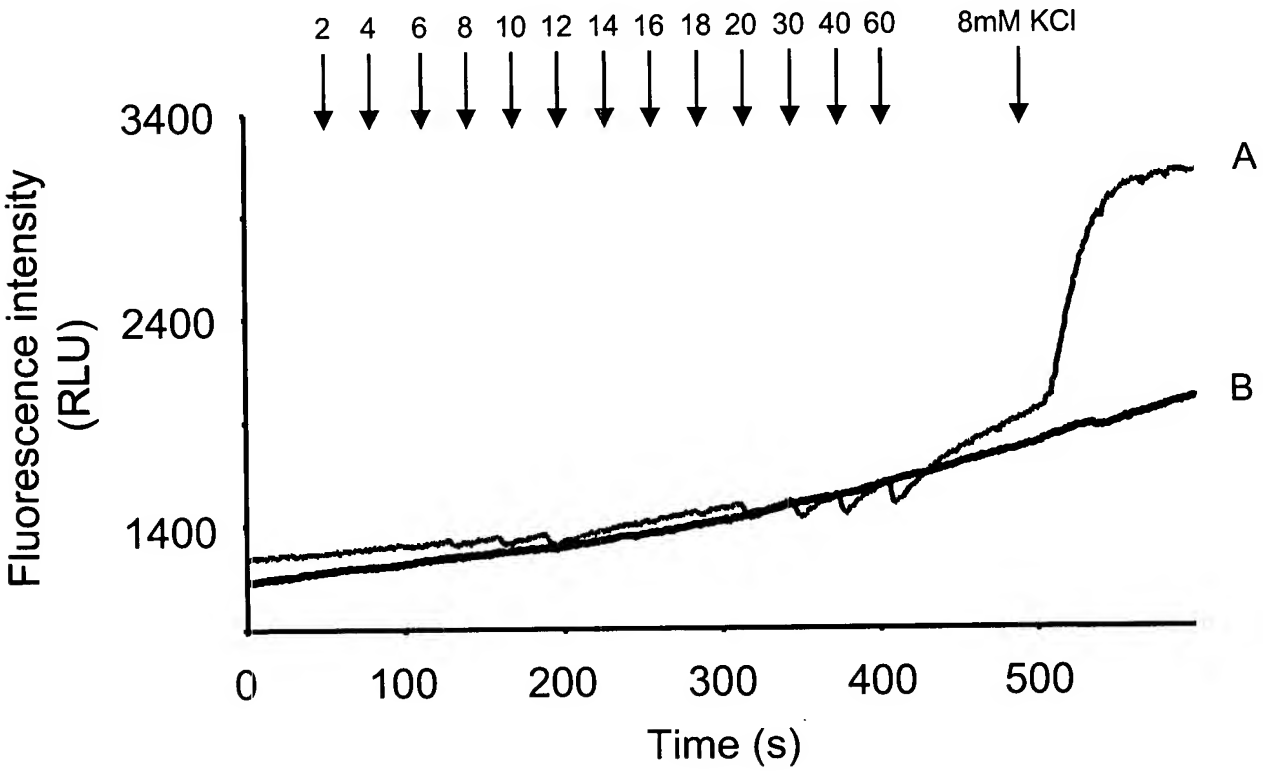

2 4 6 8 10 12 14 16 18 20 30 40 60
8mM KCl
3400
2400
1400
Fluorescence intensity (RLU)
A
B
0
100
200
300
400
500
Time (s)

Figure 7

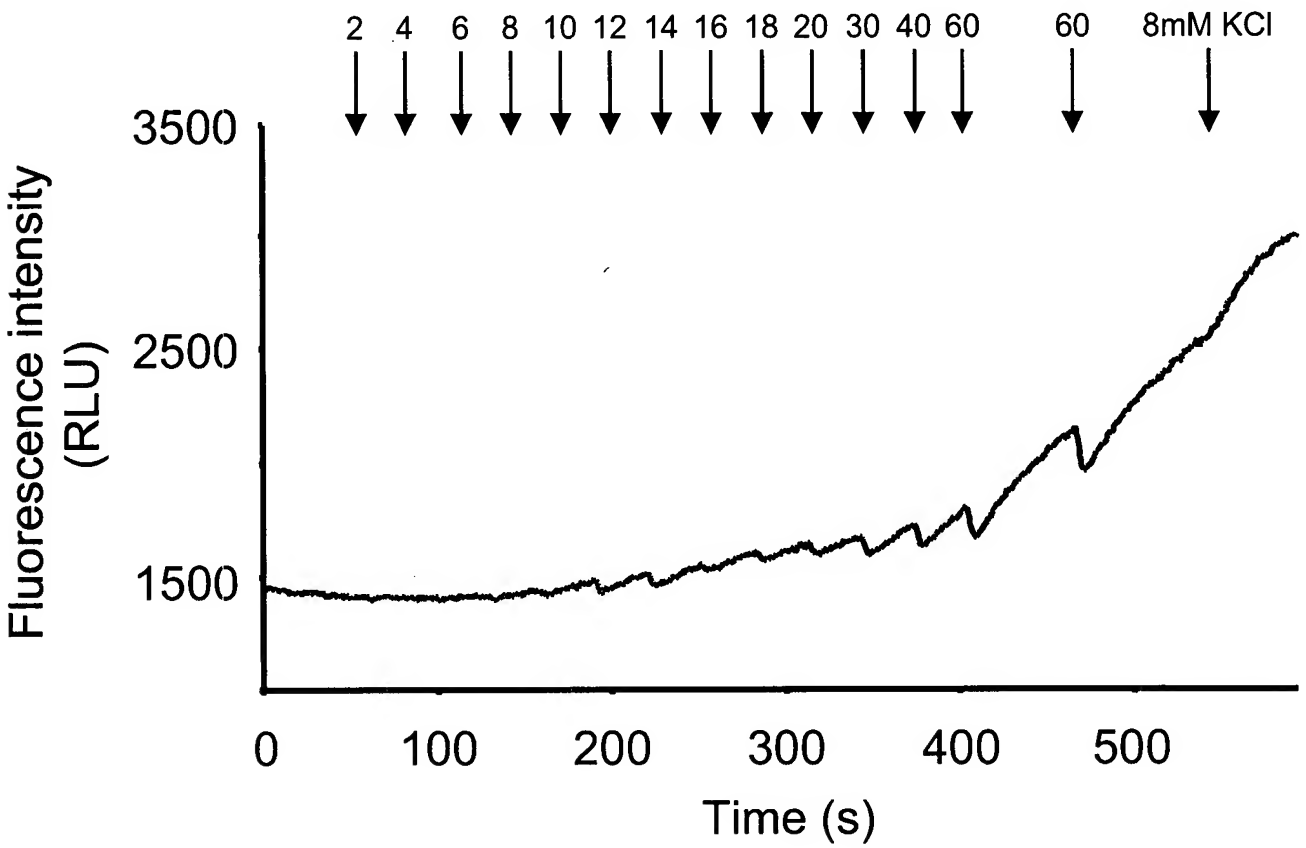
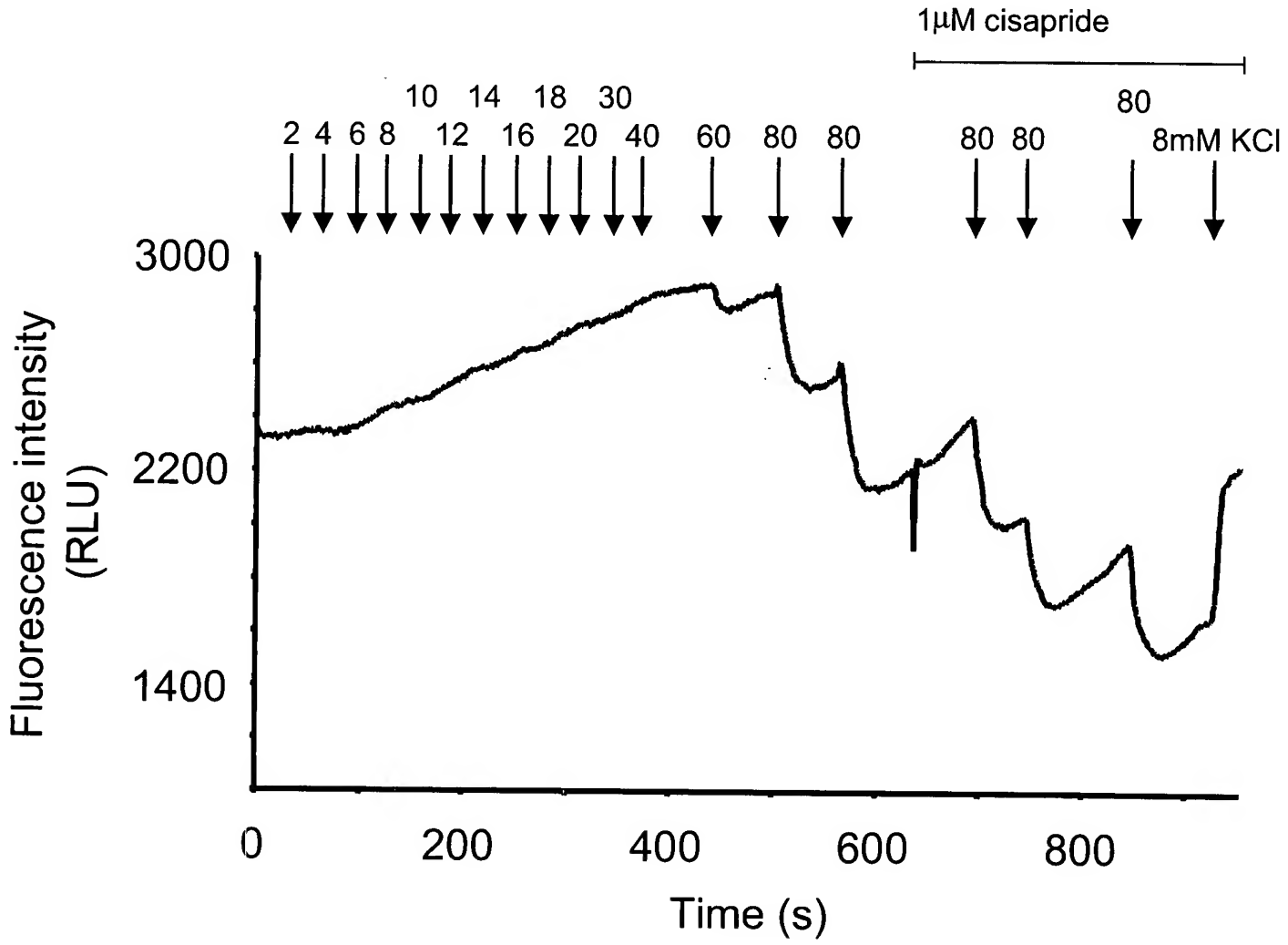

2 4 6 8 10 12 14 16 18 20 30 40 60 60 8mM KCl
3500
2500
1500
Fluorescence intensity (RLU)
0 100 200 300 400 500
Time (s)

Figure 8


1μM cisapride
2 4 6 8 10 12 14 16 18 20 30 40 60 80 80 80 80 80 8mM KCl
Fluorescence intensity (RLU)
3000
2200
1400
0
200
400
600
800
Time (s)